

### **Abstract**

Concatenated join tables are converted into a tree structure at a high speed. First, table-formatted data is divided into one or more information blocks consisting of a value list containing item values in the sequence of the item value numbers corresponding to item values belonging to particular items and a pointer sequence containing pointer values for indicating the item value numbers in the sequence of the unique record number. Next, table-formatted data whose items are to be made common are selected, value lists of a predetermined item are made equivalent, and join is executed. Join is repeated between necessary table-formatted data. Next, among the concatenated table data, one which is to be a root is selected. According to the table-formatted data concatenation, depth of the table-formatted data is decided. According to the table-formatted data concatenation and depth, a value indicating a record is arranged on a tree description table describing the tree.